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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,047	02/13/2002	Kenneth R. Burch	SC11767TC	7466

23125 7590 09/16/2003

MOTOROLA INC
AUSTIN INTELLECTUAL PROPERTY
LAW SECTION
7700 WEST PARKER LANE MD: TX32/PL02
AUSTIN, TX 78729

EXAMINER

WILCZEWSKI, MARY A

ART UNIT	PAPER NUMBER
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2822

DATE MAILED: 09/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/075,047

Applicant(s)

BURCH, KENNETH R.

Examiner

Mary Wilczewski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 20-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-6, 8 and 20-25 is/are rejected.
- 7) ☒ Claim(s) 7, 9 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of the invention of claims 1-9 in Paper No. 4 is acknowledged. Applicant has not expressly stated that the election is without traverse. However, since Applicant has not provided any arguments traversing the restriction requirement, the election is deemed *without traverse*.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5, 6, 8, 20, 21, 22, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirt, U.S. Patent 6,448,802.

Hirt '802 discloses a method for testing an integrated circuit in which a wafer having multiple die separated by a singulation region are provided, a visual indicator comprising an LED is provided for at least some or all of the die, test circuitry is provided for at least some or all of the die, a test is performed and the LED is used to visually indicate the test result, see figures 2, 5, 6, 7, and 8 and column 2, lines 61-62; column 3, lines 10-21; column 4, lines 33-45 and 53-57; and column 5, lines 36-45. In the method of Hirt an indication of whether the testing failed or passed is provided on the die with an LED (reference numeral 88 in Fig. 5) which provides a visual indication responsive to the test result output. In the method of Hirt the visual indicator is used in

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conjunction with a result register to provide a visual indication of whether the test passed or failed. The use of a result register coupled to a LED is deemed to satisfy the step of the claims that requires outputting a test result to the visual functional indicator. The actual lighting of the LED is deemed to satisfy the step of using the test result to create a visual indication on the wafer corresponding to the test result.

Claims 3 and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Hirt, U.S. Patent 6,448,802, in view of Krug, U.S. Patent 4,961,053.

Hirt '802 is applied as above. Hirt lacks anticipation only of placing the visual function indicator or LED within the scribe area of the wafer. Krug discloses a method for testing an integrated circuit in which the display device, for example, an LED, is provided in the peripheral region of the wafer. This region of the wafer can be considered "within the scribe area of the wafer", since this portion of the wafer will subsequently be cut away from the other die on the wafer, see Figure 1 and column 3, line 46, bridging column 4 to line 11. It would have been obvious to one skilled in the art to locate the visual function indicator either on each individual die or within the scribe region of the wafer, since both techniques are known alternatives in the art for the placement of visual test indicators.

Allowable Subject Matter

Claims 7, 9, and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the

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limitations of the base claim and any intervening claims. None of the prior art of record teaches or suggests using a binary coded decimal LED as the visual function indicator.

While it is known to record the visual indication of test results with a camera or other imager, see, for example, the U.S. Patent to Karasawa, there is no teaching or suggestion in the prior art of record to use the recorded images to form a database to be used by the singulation tool.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additionally cited references disclose various methods for testing integrated circuits.

Any inquiry concerning this communication should be directed to Mary Wilczewski at telephone number (703) 308-2771.

A handwritten signature in black ink, consisting of a stylized 'M' followed by a horizontal line.

M. Wilczewski
Primary Examiner
Tech Center 2800